## ABSTRACT

A bi-directional high speed video data transmission system. A transmitter transmits an encoded video data stream across a data pair to a receiver by switching a DC current, via a pair of transistors, across the two data lines comprising the data pair. As the current varies on the data lines, so too does the voltage. The receiver decodes the serial video data stream back into its component parts so that the video data may be displayed by an appropriate display device. A pair of summing resistors adds the AC currents seen across the data lines to reconstruct the original DC current as a DC return current. The DC return current may be used to drive a return transmitter located on the original receiving side in order to send video data to the original transmitting side of the bi-directional video data transmission system.